

REMARKS

Claims 38-40 are cancelled, without prejudice, as being directed towards a previously non-elected invention. Claims 10 and 28-32 are cancelled. Claims 1-9, 11-27 and 33-37 are amended. Claim 41 is new. No new subject matter is added. Claims 1-9, 11-27, 33-37 and 41 are now pending in the application. Reconsideration and allowance of the pending claims is requested in light of the following remarks.

In the Claims

The amendment of claims 1, 9 and 21 is fully supported by the original application at, e.g., claim 1, claim 9, claim 21, and FIG. 1.

The amendment of claims 2-3, 5-6, 22 and 24-25 is fully supported by the original application at, e.g., FIG. 2.

The amendment of claims 4 and 23 is fully supported by the original application at, e.g., claim 4 and FIG. 3.

The amendment of claim 7 and 26 is fully supported by the original application at, e.g., FIG. 4.

The amendment of claim 11 and the addition of new claim 41 are fully supported by the original application at, e.g., FIG. 1.

The amendment of claims 16 and 34 is fully supported by the original application at, e.g., FIG. 5.

The amendment of claim 20 is fully supported by the original application at, e.g., claims 30 and 31. Thus, the amendment of claim 20 is not one which necessitates further consideration and/or search, as the new features that now appear in claim 20 originally appeared in claims 30-31 and could reasonably have been expected to be claimed. MPEP 706.07(a).

The amendment of claims 8, 12-15, 17-19, 27, 32-33 and 35-37 is fully supported by the original application at, e.g., claims 8, 12-15, 17-19, 27, 32-33 and 35-37, respectively.

Claim Rejections – 35 U.S.C. § 102

Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,635,117 to Kinnard, et al. (“Kinnard”). The applicant disagrees.

Kinnard FIG. 3 illustrates a lower baffle plate 157 and an upper baffle plate 155 (column 5, lines 46-48). Contrary to claim 1, Kinnard FIG. 3 illustrates that the lower baffle plate 157 and the upper baffle plate 155 do not have substantially the same diameter.

For this reason, Kinnard fails to anticipate claim 1 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Claims 2-7 depend from claim 1, and inherently contain the features of claim 1. Consequently, Kinnard fails to anticipate claims 2-7 for at least the same reason as claim 1. MPEP 2131.

Further regarding claim 2, Kinnard FIG. 5 illustrates channels 180, inlets 182, and outlets 186 in the lower baffle plate 157 (column 6, lines 45-50). Contrary to claim 2, Kinnard FIG. 5 fails to illustrate that the inlets 182 are arranged such that each inlet 182 is separated from an adjacent inlet 182 by an angular spacing that is substantially equal to 360 degrees divided by a total number of inlets 182. For this additional reason, Kinnard fails to anticipate claim 2 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Also contrary to claim 2, Kinnard FIG. 5 fails to illustrate that the outlets 186 are arranged such that lines drawn from each of the outlets 186 to a radial center of the lower baffle plate 157 divide the lower baffle plate 157 into substantially equal parts. For this additional reason, Kinnard fails to anticipate claim 2 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Further regarding claim 3, Kinnard FIG. 5 fails to illustrate that the inlets 182 consist of four inlets, that the outlets 186 consist of four outlets, or that the channels 180 consist of four channels. For each one of these additional reasons, Kinnard fails to anticipate claim 3 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Further regarding claim 4, Kinnard FIG. 5 fails to illustrate that the channels 180 are arranged parallel to each other. For this additional reason, Kinnard does not anticipate claim 4 because it fails to show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Further regarding claim 5, Kinnard FIG. 5 fails to illustrate that the inlets 182 and outlets 186 are arranged in pairs consisting of one inlet 182 and one outlet 186. Kinnard also fails to

illustrate that an angular spacing between the one inlet 182 and the one outlet 186 of each pair is less than the angular spacing between the inlets 182 and an angular spacing between the outlets 186. For each one of these additional reasons, Kinnard fails to anticipate claim 5 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Further regarding claim 6, Kinnard FIG. 5 fails to illustrate four channels 180 arranged such that a path of each of the four channels 180 within the lower baffle plate 157 forms two legs of a right triangle. For this additional reason, Kinnard fails to anticipate claim 5 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Further regarding claim 7, Kinnard FIG. 5 fails to illustrate that half of the inlets 182 and half of the outlets 186 are arranged along the first semicircular portion, that the other half of the inlets 182 and the other half of the outlets 186 are arranged along the second semicircular portion, or that the channels 180 are arranged such that they are parallel to one another. For each one of these additional reasons, Kinnard fails to anticipate claim 7 because it does not show the identical invention in as complete detail as contained in the claim. MPEP 2131.

Claim Rejections – 35 U.S.C. § 103

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as obvious over Kinnard. The applicant disagrees.

Claims 6 and 7 are allowable over Kinnard at least because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03.

Furthermore, Kinnard fails to teach the features of claims 6 and 7 as was explained above in the section discussing the 102 rejections. Consequently, Kinnard fails to establish *prima facie* obviousness for claims 6 and 7 because it fails to show all the features recited in the claims. MPEP 2143.03.

Further regarding claim 6, the Office Action suggests that because Kinnard FIG. 5 is not drawn to scale, it is not possible to determine the relative positions of inlets 182 relative to outlets 186. The applicant profoundly disagrees with this proposition. It is tantamount to saying that it is not possible to determine the relative position between Los Angeles and New York because the map that one is holding in their hands is not drawn to scale.

It is well known that scale refers to an object's size. Scale is irrelevant to the relative positions between two objects. Regardless of what particular scale is used in FIG. 5, it must be

assumed that *every* feature in FIG. 5 is drawn to the same scale. Thus, regardless of the *actual* physical sizes of the features illustrated in FIG. 5, the relative position between the features of FIG. 5 is *exactly* as illustrated in FIG. 5.

MPEP 2125 states that the proportions of features in a drawing are not evidence of actual proportions when drawings are not to scale. In particular, when the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. MPEP 2125, *citing Hockerson-Halberstadt, Inc., v. Avia Group Intn'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) (The disclosure gave no indication that the drawings were drawn to scale. “[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show *particular sizes* if the specification is completely silent on the issue.”).

Nowhere does MPEP 2125 suggest that drawings cannot be used to determine the relative positions between two objects when both of the objects are drawn to the same scale.

Furthermore, regardless of the actual physical size of Kinnard’s lower baffle plate 157 (FIG. 5), the angular relationship between an inlet 182 and its corresponding outlet 186 will remain constant, since both must be located on the circular edge of the lower baffle plate. Clearly, Kinnard FIG. 5 illustrates that any inlet 182 and its corresponding outlet 186 do not have the angular relationship specified in claim 6.

Claims 9-13, 16-18, 20-26, 28-31 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinnard in view of U.S. 5,775,416 to Heimanson (“Heimanson”). The applicant disagrees.

Contrary to claim 9, Heimanson FIG. 1 illustrates that a lower surface of the alleged separating device 36a is not disposed in contact with the bottom wall of the processing chamber.

Kinnard does not teach this feature, nor is it alleged to do so. Consequently, the combination of Kinnard and Heimanson fails to establish *prima facie* obviousness for claim 9 because it does not teach or suggest every feature recited in the claim. MPEP 2143.03.

Claim 10 is cancelled.

Claims 11-13 and 16-18 depend from claim 9, and inherently contain the features of claim 9. Consequently, claims 10-13 and 16-18 are allowable over the combination of Kinnard

and Heimanson at least because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03.

Further regarding claim 11, Heimanson does not teach that a position of element 36a remains fixed relative to the process chamber. For this additional reason, the combination of Kinnard and Heimanson fails to establish *prima facie* obviousness for claim 11 because it does not teach or suggest all of the features recited in the claims. MPEP 2143.03.

Further regarding claim 12, Heimanson does not teach that element 36a is configured to separate the heater stage and the process chamber by a uniform distance. For this additional reason, the combination of Kinnard and Heimanson fails to establish *prima facie* obviousness for claim 12 because it does not teach or suggest all of the features recited in the claims. MPEP 2143.03.

Further regarding claim 13, Heimanson does not teach that the heater stage and the process chamber are separated by about 2-10 cm. For this additional reason, the combination of Kinnard and Heimanson fails to establish *prima facie* obviousness for claim 13 because it does not teach or suggest all of the features recited in the claims. MPEP 2143.03.

Further regarding claim 16, Heimanson does fails to teach or suggest that the separating device is ring shaped, and that the upper surface of the separating device is configured to abut a lower surface of the heater stage, where a substantial portion of the upper surface of the separating device disposed directly beneath the lower surface of the heater stage. For these additional reasons, the combination of Kinnard and Heimanson fails to establish *prima facie* obviousness for claim 16 because it does not teach or suggest all of the features recited in the claims. MPEP 2143.03.

Regarding claim 20, the claim was amended to incorporate subject matter that originally appeared in claims 30 and 31. Claim 20 as amended now recites that the separating device is arranged to separate the heater stage from a bottom of the process chamber by a substantially uniform amount, and that the substantially uniform amount is in a range of about 2 to about 10 cm.

It is alleged that Kinnard discloses this feature of claim 20 at FIG. 1, FIG. 3, column 3, lines 35-46; and column 5, lines 35-65. To the contrary, these particular portions of Kinnard fail to teach or suggest that the separation device is arranged to separate the heater stage from a bottom of the process chamber by a substantially uniform amount, or that the substantially

uniform amount is in the range of about 2 to about 10 cm. Kinnard in its entirety fails to teach or suggest this feature, and Heimanson is recognized as not teaching or suggesting this feature.

For this reason, the combination of Kinnard and Heimanson fails to establish *prima facie* obviousness for claim 20 because it does not teach or suggest all the features recited in the claim. MPEP 2143.03.

Claims 28-31 are cancelled.

Claims 21-26 and 34-36 depend from claim 20, and inherently contain the features of claim 20. Consequently, claims 21-26, 30-31 and 34-36 are allowable over the combination of Kinnard and Heimanson at least because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03.

Further regarding claim 34, Heimanson does not teach that element 36a is rimshaped and is configured to closely adhere to the bottom of the heater stage. Heimanson specifically teaches that the bottom of the heater stage and element 36a are separated at least by the heater leads 104, and it does not show the heater stage and element 36a in contact at all. See Heimanson FIG. 3. For this additional reason, the combination of Kinnard and Heimanson fails to establish *prima facie* obviousness for claim 34 because it does not teach or suggest all of the limitations recited in the claims. MPEP 2143.03.

Claims 8, 14-15, 19, 27, 32-33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinnard and Heimanson in view of U.S. 5,529,632 to Katayama, et al. (“Katayama”). The applicant disagrees.

Claims 8, 14-15, 19, 27, 32-33 and 37 are allowable over the combination of Kinnard, Heimanson, and Katayama at least because any claim that depends from a nonobvious independent claim is also nonobvious. MPEP 2143.03.

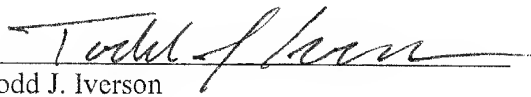
Further regarding claim 19, Katayama does not teach a process chamber cooling system configured to cool a bottom surface of the process chamber. Katayama teaches a cooling system for cooling the sides of the process chamber. See Katayama FIG. 2. For this additional reason, the combination of Kinnard, Heimanson, and Katayama fails to establish *prima facie* obviousness for claim 19 because it does not teach or suggest all of the limitations recited in the claim. MPEP 2143.03.

Conclusion

For the reasons presented above, reconsideration and allowance of the pending claims is requested. Please telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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